Air Force Materiel Command

AFMC Role in the Capability Requirements Process

Mr. Evan Marlin
HQ AFMC/A5RR
Chief, Capability Requirements Branch
23 June 2015

Purpose

Awareness of AFMC role in:

- ***Capability requirements development process***
  - *Provide program office support*
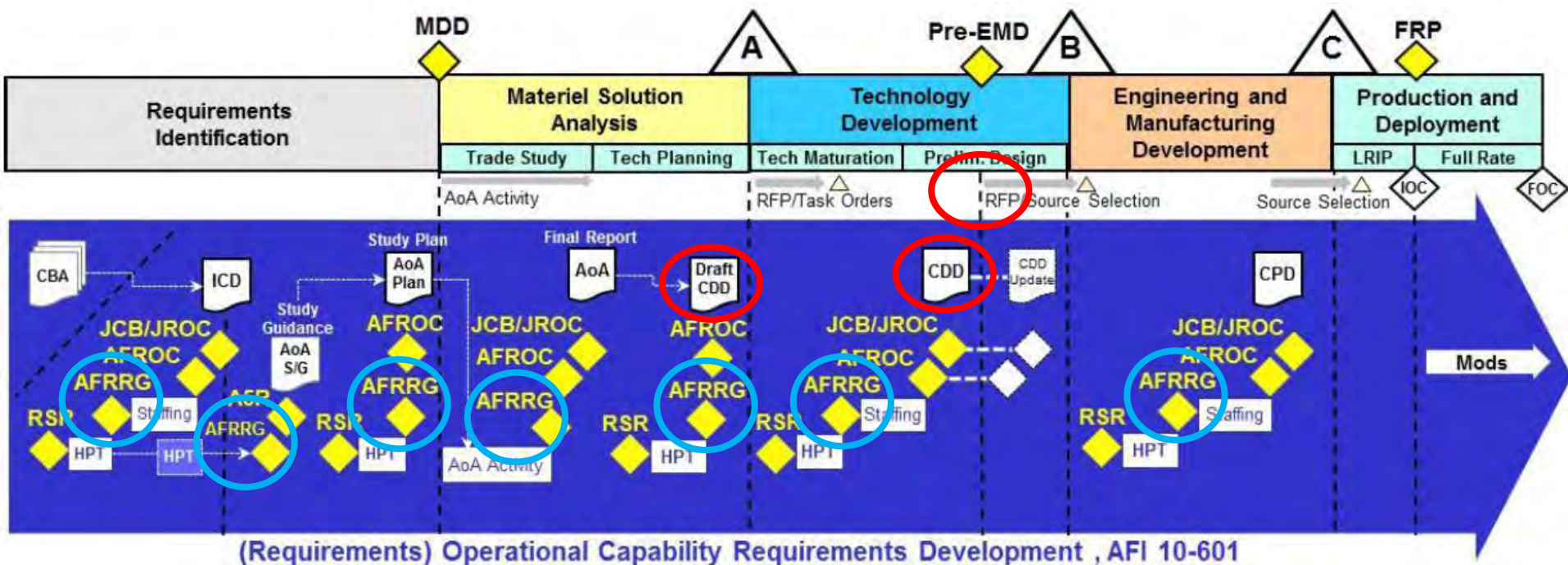 - *Provide PM / PEO top cover if needed*

Overview

- **Capability Requirements Process Overview**
- **Capability Requirements Guidance**
- **Capability Requirements Process**
  - **Air Force Gatekeeper (AFGK)**
  - **High Performance Teams (HPTs)**
  - **Air Force Requirements Review Group (AFRRG)**
  - **Capability Requirements Document Review**
  - **Air Force Requirements Oversight Council (AFROC)**
  - **Capability Requirements Certification/Attestation**
- **Cost Capability Analysis**
- **Urgent Needs**
- **Available Resources / Training**
- **Summary**

Capability Requirements Development Process Overview

(Requirements) Operational Capability Requirements Development , AFI 10-601

- **New Air Force decision body / Air Force Requirements Review Group (AFRRG)**
- **New JCIDS requirement for service validated "Draft CDD" prior to MS A**
- **New decision points included in DoDI 5000.02**
  - **Requirements Decision Point = AF AFROC CDD validation**
    - ➢ **Basis for Preliminary Design Review and activities**
  - **Development Request for Proposal Release Decision Point**
   - ➢ **Authorizes the release of RFPs for EMD to industry**

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DoD and Joint Guidance

- ## DoDI 5000.02 (7 Jan 15)

  - *Operation of the Defense Acquisition System*

  - **ACAT Thresholds, SE Tradeoff Analysis, Urgent Needs Process**

- ## CJCSI 3170.01H JCIDS (23 Jan 15)

  - *Joint Capabilities Integration and Development System (JCIDS)*

  - **Establishes JCIDS process, policy, & procedures**

- ## JCIDS Manual (12 Jun 15)

  - **Provides detailed processes & procedures**
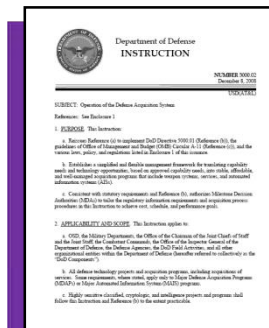
Interim DoDI 5000.02

CJCSI 3170.01H

JCIDS Manual

ICD
- Initial Capabilities Document (MDD)
- Documents one or more new capability requirements and associated capability gaps

IS ICD
- Information Systems Initial Capabilities Document (MDD)
- Documents one or more new capability requirements and associated capability gaps implementing the IT Box model

Joint / Air Force DCR
- Joint or Air Force DOTmLPF-P Change Request (DCR)
- Addresses an identified capability requirement and associated capability gap with a non-materiel solution

Draft CDD
- Draft Capability Development Document (MS A)
- Informs Technology Development Strategy and Request for Proposals for Technology Development Phase

CDD
- Capability Development Document (MS B)
- Defines measurable and testable parameters across one or more increments of a materiel capability solution necessary to design and propose systems and establish programmatic baselines

IS CDD

- ➢ **Information System Capability Development Document (MS B/C)**
- ➢ **Transitions existing program with validated ICD or CDD to the IT Box Model**

CPD

- ➢ **Capability Production Document (MS C)**
- ➢ **Provides testable capability requirements for the Production and Deployment phase of an acquisition program**
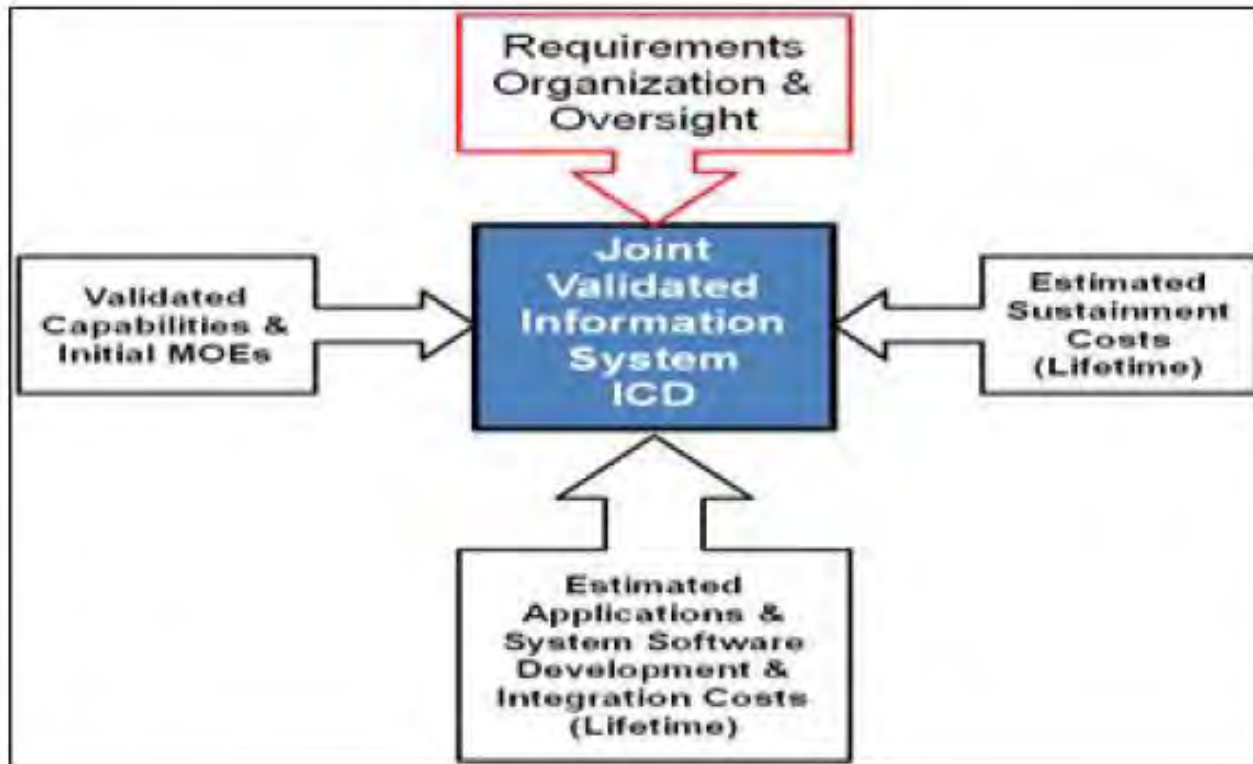
UON / JUON

- ➢ **Urgent Operational Need (UON) and Joint Urgent Operational Need (JUON)**
- ➢ **Documents critical capability gap/shortfall that could result in loss of life and/or critical near-term mission failure**

## IT Box Model For Information Systems

Air Force Guidance

- **AFPD 10-6** (6 Nov 13)
  - *Capability Requirements Development*
  - **Air Force capability requirements development process framework**

- **AFI 10-601** (6 Nov 13)
  - *Operational Capability Requirements Development*
  - **Outlines the AF specific process for capability requirements development**

- **AFI 63-101/20-101** (21 Mar 14)
  - *Integrated Life Cycle Management*
  - **AFMC/CC Certification and Attestation of capability requirements**

- **AFI 63-131** (19 Mar 13)
  - *Modification Management*
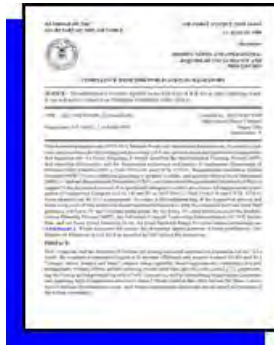 - **AF Form 1067 Modification Proposal**

AFPD 10-6
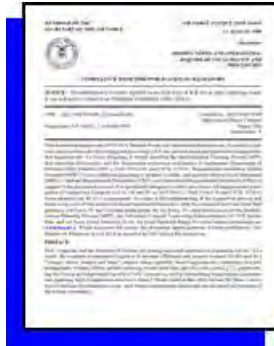
AFI 10-601

AFI 63-101/ 20-101

AFI 63-131

AF Form 1067 Approval & Validation

- ## AF Form 1067 Modification Proposal
  - Documents capability requirements modifications to fielded systems w/in certain $ thresholds

IF Total Cost Estimate (Proc & RDT&E) is:	THEN the Validation & Approval Authority is:	…And the Documentation Required is: (as determined by Validation Authority)
Less than $50M	MAJCOM Director of Requirements & PM	IF validated as Permanent "Sustainment" or Temporary mod THEN approve use of AF Form 1067
Between $50-100M	AF/A5R	IF validated as Permanent "New Capability" AND less than 10% of ACAT II minimums (per DODD 5000.02) THEN approve use AF Form 1067 And include a KPP/KSA Table
More than $100M	AFROC and AF/CV	Otherwise, need to develop new JCIDS Document(s) for appropriate approval/validation

AFI 10-601 / Table 6.1.

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Air Force Gatekeeper (AFGK)

- **AF/A5R-P is AFGK**
  - **Initial Requirements Strategy Review (RSR) for ICDs**
  - **Follow-On RSR for CDDs, CPDs, etc.**

- **Sponsor develops requirements strategy in collaboration with key stakeholders**
  - **Operator, acquisition (program manager, systems engineer, logistics, test, intelligence), others as required**

- **Requirements strategy normally includes**
  - **Intelligence, analysis, funding, schedule, testing, sustainment, training, and draft requirements**

AFGK ● ○ **Sponsor Drafts Document** ○ **HPT** ○ **Post-HPT AFRRG** ○ **Document Review** ○ **AFROC Validation** ○ **AFMC/CC Certification or Attestation**
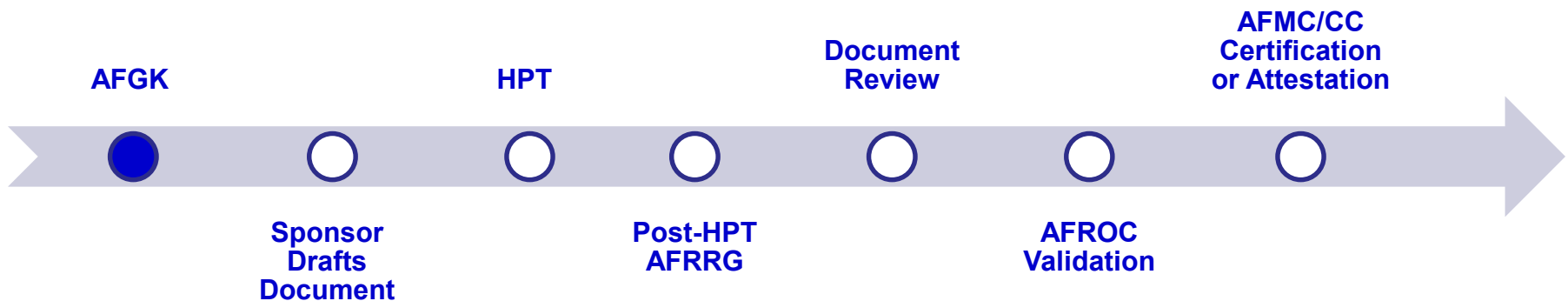
High Performance Teams (HPTs)

- **Sponsor drafts initial document prior to HPT**

- **1-2 week meeting to finalize document**
  - **Sponsor led with AF/A5R-P guidance**
  - **7-11 core participants in person**
    - ➢ **Operator, acquisition (program manager, systems engineer, logistics, test, intelligence), others as required**
  - **Support members available via phone / e-mail**

- **HPT benefits**
  - **Accelerates documentation process**
  - **Improves document quality**
  - **Provides enduring forum**

AFGK **HPT** **Document Review** **AFMC/CC Certification or Attestation**

Sponsor Drafts Document **Post-HPT AFRRG** **AFROC Validation**

Post-HPT
AF Requirements Review Group (AFRRG)

- **AFRRG: O-6 level forum mirrors AFROC composition**

- **Provides corporate cross-functional review prior to AFROC**

- **Reviews documents prior to formal AF document review**
  - **Quality check for critical "show stopping" issues**
  - **Reduces post staffing comment adjudication**

- **Other AFRRG roles/responsibilities**
  - **Conducts initial RSRs**
  - **Reviews AoA Study Guidance, Study Plans, and Final Reports**

AFGK **HPT** **Document Review** **AFMC/CC Certification or Attestation**

Sponsor Drafts Document **Post-HPT AFRRG** **AFROC Validation**
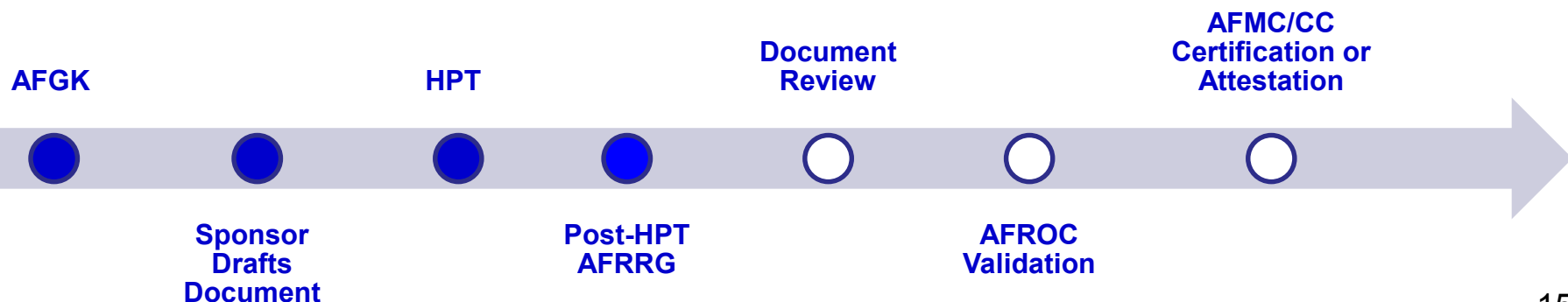
Capability Requirements Document Review

- **Required prior to meeting AFROC**
  - **Mandatory 21 calendar day review**
- **HQ AFMC/A5R leads AFMC O-6 review**
  - **Distributes documents AFMC-wide**
  - **Collects and consolidates comments**
  - **Ensures quality comments with supporting rationale**
  - **Ensures comment criteria met**
  - **Provides sponsor with O-6 endorsed corporate AFMC position**

AFGK — **HPT** — **Document Review** — **AFMC/CC Certification or Attestation**

Sponsor Drafts Document — **Post-HPT AFRRG** — **AFROC Validation**
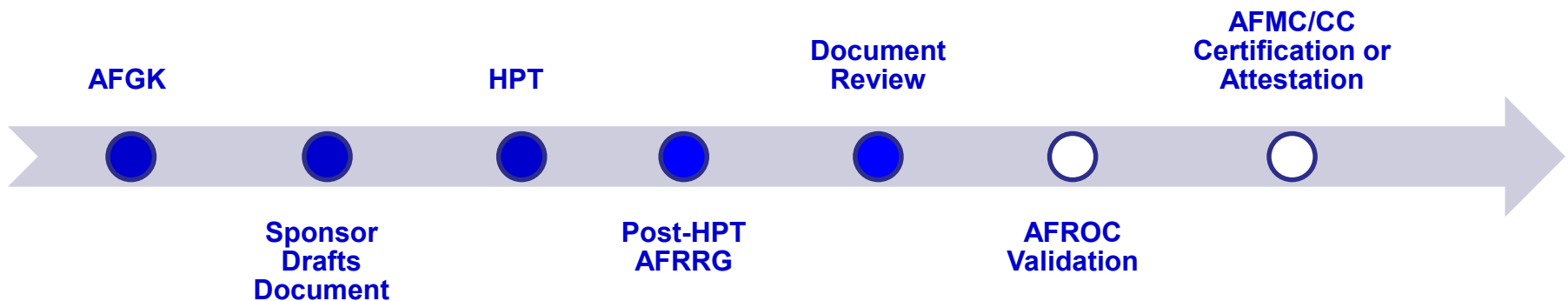
Document Review Comments

Org / Reviewer	Page #	Para #	Line #	Class (U,C,S)	Type (A,S,C)	Recommendation	Rationale	Comment
Office Symbol, Name, DSN, Email address				U, C, S	A, S, C			

- ## Comment criteria
  - ### Critical (C): Indicates non-concurrence with document
    - Must have convincing rationale
    - Sponsor must resolve with submitter prior to meeting AFROC
  - ### Substantive (S): Appears to be incorrect, unnecessary, misleading, confusing, or inconsistent w/ other sections
    - Sponsor need only address comment
  - ### Admin (A): Typographical, formatting, or grammatical errors

- **All comments submitted must be endorsed by an O-6/GS-15**
- **Critical comments must be approved by AFMC/A5/8/9 (GO)**

AFROC

- **CSAF instrument to review, validate, & approve AF capability requirements, AoA study plans, and final reports**
  - 1 & 2-star monthly meeting

- **AFMC/A5/8/9 is voting member**
  - **Validates all AFMC comments satisfactorily adjudicated**
  - **Provides requirements feasibility certification/attestation**

- **Sponsor responsible for overall briefing**
  - **Program Office briefs program management aspects**

Unclassified
Year of the Air Force Family

Program Cost Driver Quad Chart

Program Name

Top Cost Drivers
1. A, % of program cost
2. B, % of program cost
3. C, % of program cost
4. D, % of program cost
5. E, % of program cost

Performance (KPPs & select KSAs)
KPP 1
KPP 2
KPP 3
KSA 2
KSA 5
N – no capability   T – Threshold   O - Objective

Technology Readiness Assessment

Critical Technologies	Current Assessment	Est @ Next Milestone
Technology A	TRL #	TRL #
Technology B	TRL #	TRL #
Technology C	TRL #	TRL #
Technology D	TRL #	TRL #
Technology E	TRL #	TRL #
Technology F	TRL #	TRL #

Acquisition Program Baseline (APB)
Cost
- PAUC
- APUC
Schedule
- IOC or FOC
- (Next Major Evt)
MS B Date: M/Yr
MS C Date: M/Yr

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Unclassified

AFGK — **HPT** — **Document Review** — **AFMC/CC Certification or Attestation**

Sponsor Drafts Document — **Post-HPT AFRRG** — **AFROC Validation**

AFROC Members

Headquarters U.S. Air Force

Integrity - Service - Excellence

Welcome to the AFROC

U.S. AIR FORCE

AFSOC
AFRC
NGB
AFGSC
AMC
AFSPC
AETC
AFMC (Brig Gen Michael Brewer)
ACC
OAS

AF/A9
AFOTEC
AF/TE
AF/A10
AF/A4
AF/A2
SAF/CIO A6
SAF/AQ
AF/A8X
AF/A3

AF/DA5R
Mr. Dan Bishop

AF/A5R
Maj Gen Paul Johnson

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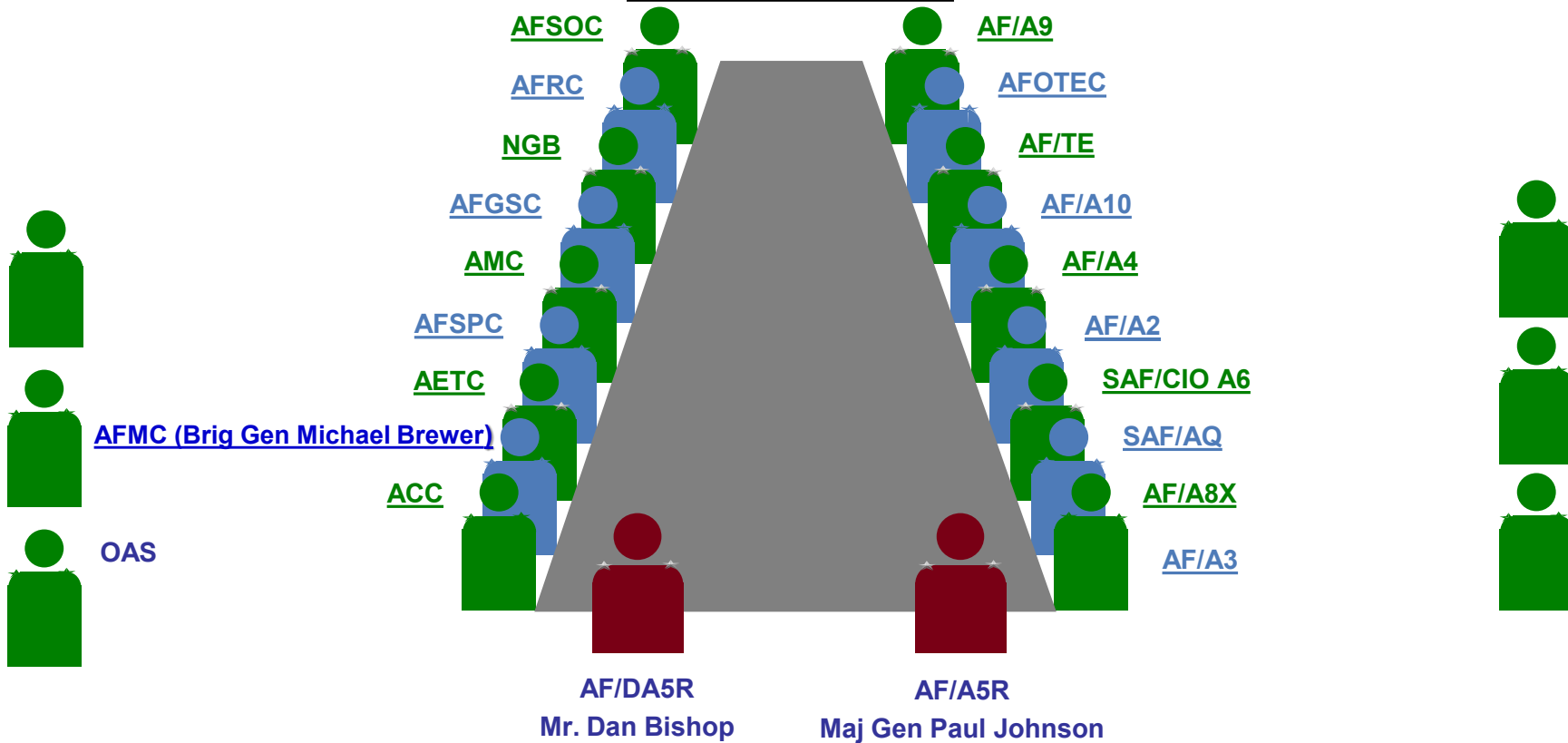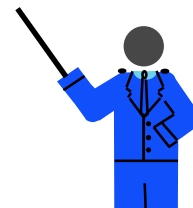
AFMC Validation & Certification / Attestation at AFROC

- **Validate** capability requirements documents and AoA products
  - All AFMC comments are satisfactorily adjudicated
- **Determine feasibility**
  - **Attest** requirements are feasible: "technically achievable and executable within the estimated schedule and budgeted life-cycle cost"
  - **Certify** with the SAE that requirements are feasible and can be evaluated in a source selection (ACAT I and non-delegated ACAT II CDDs)
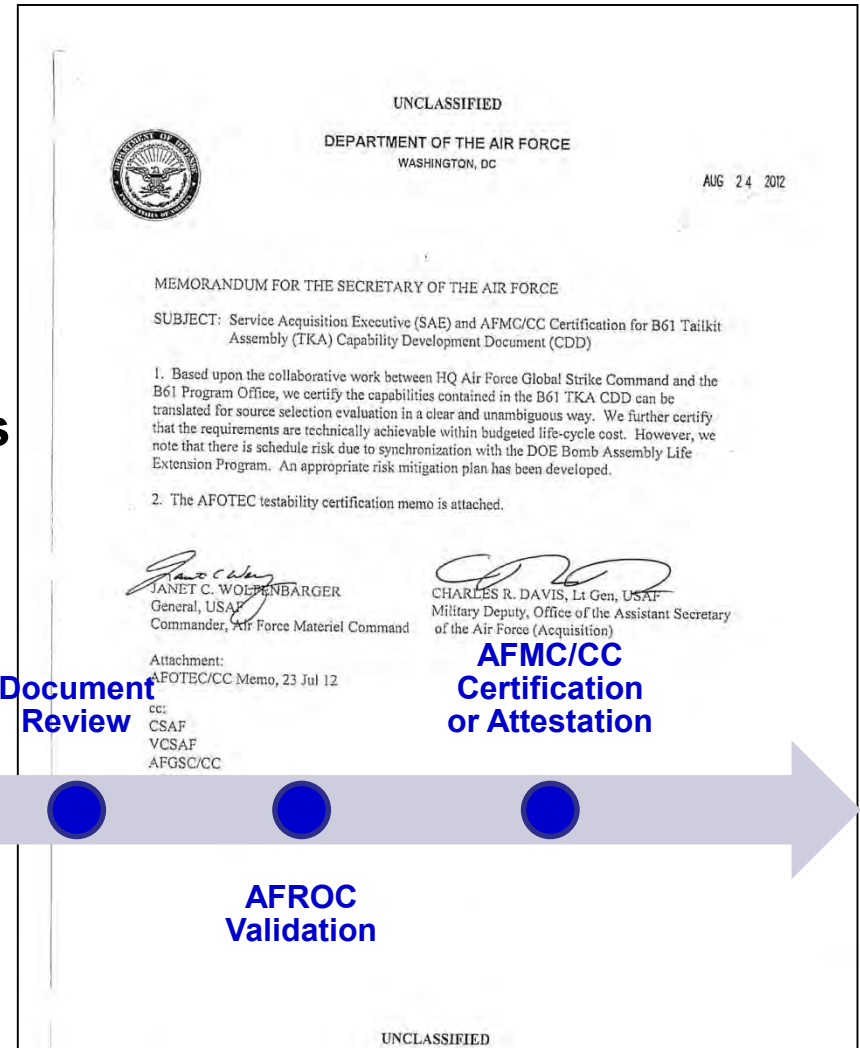
	ICD	CDD	CPD
ACAT I and non-delegated ACAT II	**N/A** (Not certified, Not attested)	**AFMC/CC and SAE Certify**	**AFMC/A5/8/9 Attest[1]**
ACAT II and III	**N/A** (Not certified, Not attested)	**AFMC/A5/8/9 Attest[1]**	**AFMC/A5/8/9 Attest[1]**

[1]**AFMC/A5/8/9 attest on behalf of AFMC/CC**

Requirements Certification / Attestation

- **AFMC/CC & SAE certification or attestation required by AFI 63-101 and AFI 10-601**

- **Primary purpose**
  - **4-star advocate for requirements issues if needed**

UNCLASSIFIED

DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

AUG 24 2012

MEMORANDUM FOR THE SECRETARY OF THE AIR FORCE

SUBJECT: Service Acquisition Executive (SAE) and AFMC/CC Certification for B61 Tailkit Assembly (TKA) Capability Development Document (CDD)

1. Based upon the collaborative work between HQ Air Force Global Strike Command and the B61 Program Office, we certify the capabilities contained in the B61 TKA CDD can be translated for source selection evaluation in a clear and unambiguous way. We further certify that the requirements are technically achievable within budgeted life-cycle cost. However, we note that there is schedule risk due to synchronization with the DOE Bomb Assembly Life Extension Program. An appropriate risk mitigation plan has been developed.

2. The AFOTEC testability certification memo is attached.

JANET C. WOLFENBARGER
General, USAF
Commander, Air Force Materiel Command

CHARLES R. DAVIS, Lt Gen, USAF
Military Deputy, Office of the Assistant Secretary
of the Air Force (Acquisition)

Attachment:
AFOTEC/CC Memo, 23 Jul 12

cc:
CSAF
VCSAF
AFGSC/CC

UNCLASSIFIED

AFGK

HPT

Document Review

AFMC/CC Certification or Attestation

Sponsor Drafts Document

Post-HPT AFRRG

AFROC Validation

AFMC/CC is 4-Star Wingman for Requirements Issues

AFROC Requirements Feasibility Assessment Template

TO: HQ AFMC/A2/5
SUBJECT: Requirements Certification/Attestation[1] for *(Document Title & Type (e.g. CDD or CPD))*

REQUIREMENTS:

☐ What is the confidence level (High, Medium, Low) for meeting Key Performance Parameters (KPPs), Key System Attributes (KSAs), System Attributes (SAs), required Technology Readiness Levels (TRLs), and Manufacturing Readiness Levels (MRLs)?[2,3] Attach the AFROC Program Cost Driver Quad Chart.[4]

☐ Are the requirements written to support the development of source selection criteria?

☐ Are the requirements measurable and testable?

COST and FUNDING:

☐ Is the program fully funded in the Future Years Defense Plan (FYDP)?[5] If not, is there a plan in place to obtain funding? Attach the AFROC Program Funding Chart.[6]

☐ What is the confidence level (expressed as a percent) of the cost estimate contained in the CDD/CPD?

☐ What is the source (e.g., program office, independent estimate) and date of the cost estimate?

SCHEDULE:

☐ What are the upcoming major schedule events (as contained in the Integrated Master Schedule (IMS), if available) and confidence level (High, Medium, Low) of meeting those events? [7]

RISK:

☐ Provide standard risk matrix in accordance with AF risk management guidance which depicts medium and high-risk areas.[8] Include risk mitigation plans.

☐ How would you describe overall program risk?

☐ Do you recommend AFMC certify or attest:
  - o Fully
  - o Conditionally (e.g. there is a technical, schedule, cost, or risk issue but a recovery plan is in place)
  - o Not at all

…that the requirements are technically achievable and executable within the estimated schedule, budgeted life-cycle cost, and risk?

The above information is accurate for AFMC/CC to use as a basis to certify/attest to requirements feasibility:

PM Name, Rank/Grade, Office Symbol, Phone:

PM Signature:
Date:

PEO Name, Rank/Grade, Office Symbol:

PEO Initial:
Date:

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Cost Capability Analysis

DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

NOV 16 2012

OFFICE OF THE ASSISTANT SECRETARY

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Implementation of Contractual and Requirements Sufficiency

CORONA Fall Tasker-9 (CFT-9) directed AF/A3/5 and SAF/AQ to conduct "Contractual and Requirements Sufficiency." The goal of this task is to improve the understanding of the effects of requirements on cost and cycle time to inform affordability. CFT-9 directed AF/A3/5 and SAF/AQ to determine explicit steps to better vet affordability, capability, and cycle time trades in the requirements and acquisition processes. In response to this task, AF/A3/5 and SAF/AQ led a cross-functional AF rapid improvement event that identified seven root causes and seven solutions to strengthen the linkage between requirements and acquisition. These root causes and solutions were approved by the CSAF on 3 Apr 12 and by the SECAF on 30 Apr 12. In addition, the Air Force Requirements Oversight Council (AFROC) approved the implementation plan for these solutions on 19 Jul 12. AFI 10-601 and the AFROC Charter are currently being updated to reflect these policy and process changes. In the interim, AF/A3/5 and SAF/AQ will implement the following processes effective immediately:

1) **Presentation of Life Cycle Cost versus Capability Analysis.** AF requirements and acquisition processes must be complimentary and aligned with fiscal realities. Affordability discussions must take place at all GO-level requirements and acquisition forums. Presentation of life cycle cost versus capability tradeoff analysis is required for all AFROCs, Air Force Requirements Review Groups (AFRRGs), Air Force Review Boards (AFRBs), and Configuration Steering Boards (CSBs). The Implementing Commands (AFMC and AFSPC) will support the requirements sponsor by providing cost and capability analysis for all analysis of alternatives (AoA) final reports, capability development documents (CDDs), and capability production documents (CPDs). This requirement for the mandatory use of cost analysis is intended to ensure affordability is used to inform decisions throughout a program's acquisition lifecycle.

2) **AFRRG.** AF/A3/5 directs A5R to establish the AFRRG. The AFRRG replaces the current Requirements Strategy Review (RSR) and AFROC Red Team. The event-driven AFRRG will provide a corporate, cross-functional review of operational capability requirements from inception through fielding to enable better informed AFROC decision making. The AFRRG will approve the initial requirements strategy and review AF-led initial capabilities documents (ICDs), CDDs, CPDs, AoA study guidance, AoA study plans, and AoA final reports. In addition, the AFRRG will review system requirements documents (SRDs) for select programs. AFRRGs will also be conducted after the High Performance Team (HPT) and prior to initial staffing. AFRRGs will be conducted in person for HAF personnel; MAJCOM and agency participation will generally be via telecon or VTC. At the direction of A5R, the AFRRG can also be conducted electronically via Information & Resource Support System (IRSS). The AFRRG will be chaired by A-A5R. AFROC organizations will be represented at all AFRRG

Issued by SAF/AQ & AF/A3/5:

The goal is to improve the understanding of effects of requirements on cost and cycle time to inform affordability

Presentation of cost capability tradeoff analysis is required for all AFROCs, AFRRG, AFRB and CSBs.

Codified in AFI 10-601: " Lead Command/CFLI in conjunction with the Implementing Command, produces and presents *cost capability analysis*, provides results at all requirements and acquisition forums, and includes in Analysis of Alternative (AoA) Final Reports, Capability Development Document (CDD), and Capability Production Document (CPD)"

The AF Must Do Cost Capability Analysis

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Urgent Needs

- **DoDI 5000.02**
  - **Enclosure 13 / *Rapid Fielding of Capabilities***
  - **Overarching guidance**

- **AFI 10-601 Chapter 7 / *Urgent Operational Needs (UONs)***
  - **AF process significantly revised (next chart)**
  - **Critical capability gap/shortfall that will result in imminent loss of life and/or result in critical mission failure**

- **Standard Center QRC Process Guide**
  - **Maintained by AFLCMC/AQ on AFLCMC Homepage**

Urgent Needs Process Overview
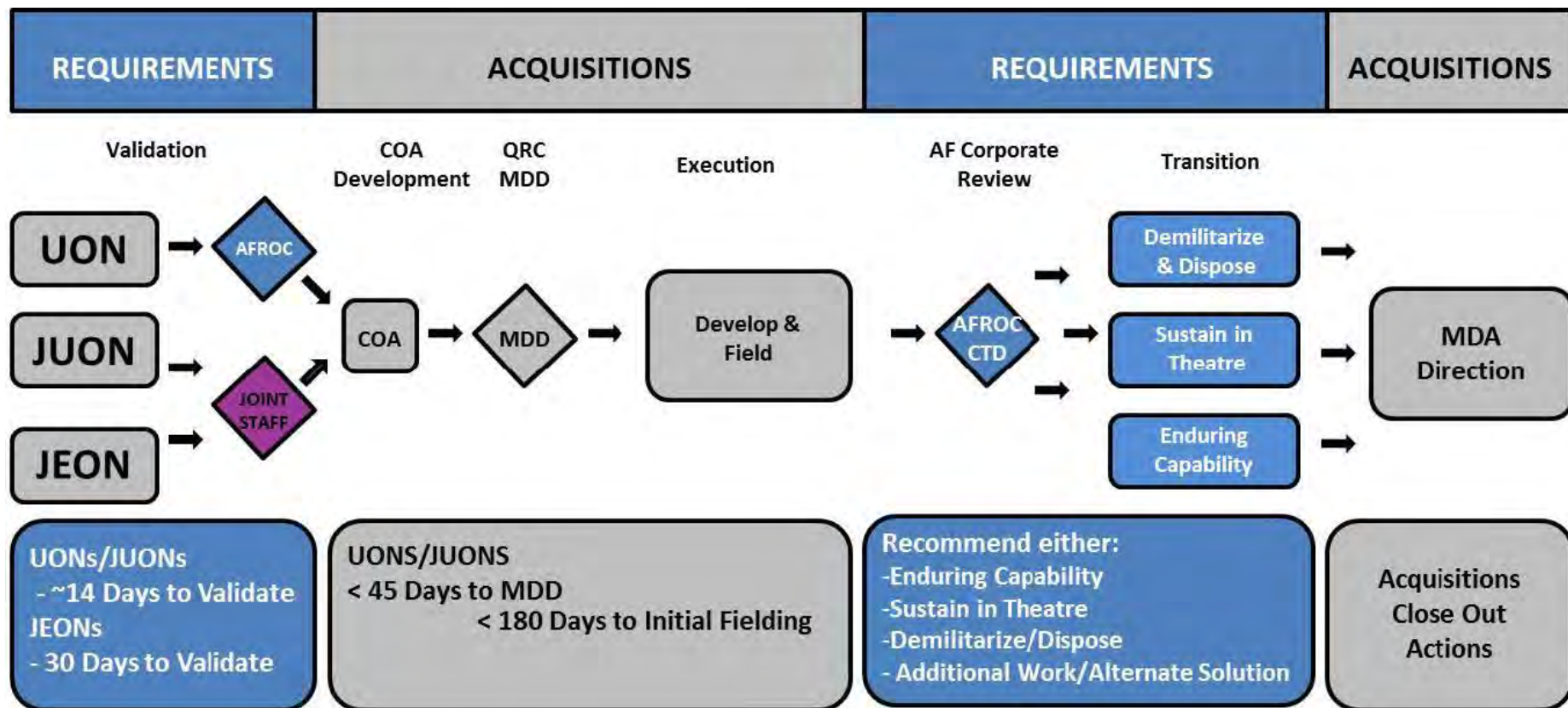
AFI 10-601 / Figure 7.1.

HQ AFMC Urgent Needs Roles

- **Advice and guidance**
- **Ensure high priority for access to command resources and facilities**
- **AFROC principal voting member**
  - **UON validation**
  - **CTD approval**
    - ➢ **Coordinate w/ program office & Centralized Asset Management (CAM) office**

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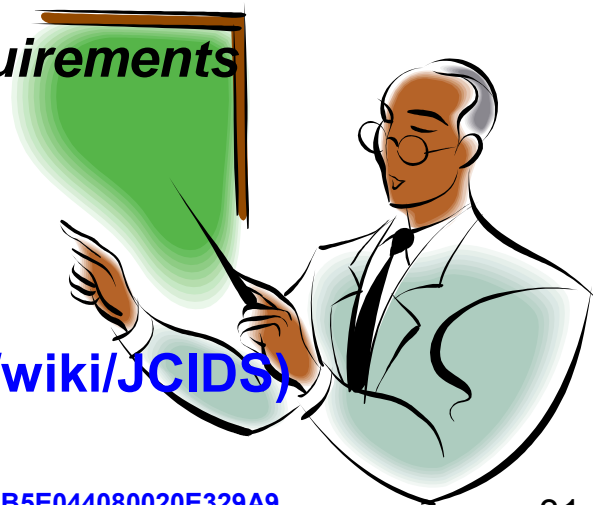- **Available Resources / Training**
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Available Resources Training

- **OSD Training**
  - **Requirements Management Certification Training (RMCT)**
  - **Congressionally mandated for all DoD personnel involved with**
    - ➢ **Capability requirements development, staffing, validation, and approval**
  - **Consists of DAU online modules**
    - ➢ ***Introduction to JCIDS* (CLR 101)**
    - ➢ ***Core Concepts for Requirements Management* (RQM 110)**

- **Air Force Training**
  - **REQ 111 *Capability Based Operational Requirements***
  - **In-residence AFIT course (2.5 days)**
  - **Next WPAFB offering 14-16 July 2015**

- **Links**
  - **Intellipedia JCIDS (https://www.intelink.gov/wiki/JCIDS)**
  - **AF/A5R-P Requirements:**
    https://www.my.af.mil/gcss-af/USAF/ep/globalTab.do?channelPageId=s6925EC1352150FB5E044080020E329A9

Available Resources
HQ AFMC/A5RR

- **Command capability requirements OPR**
  - **Established relationships w/ requirements community**
    - ➢ **AF/A5R, MAJCOM A5s, SAF/AQX**
  - **Direct line to AFMC/CC through AFMC/A5/8/9**
  - **HQ AFMC/A5RR E-Mail Distro List**
    - ➢ **Heads-up for document reviews**
    - ➢ **Notification of policy changes**
  - **PM Intro E-Mail**
    - ➢ **Sent to PM at Initial RSR**

HQ AFMC/A5RR

Evan Marlin (DSN 674-0608)   **Branch Chief**

Travis Allen (DSN 674-3558)   **AFROC / AFRRG**

Jim Kelley (DSN 787-5292)   **Requirements Portfolio Manager**

ISR/SOF Directorate	Mobility Directorate	Tanker Directorate

Mike Hall (DSN 986-3699)   **Requirements Portfolio Manager**

Fighters/Bombers Directorate	Armament Directorate	Strategic Systems	AFNWC	SMC

Capt Adam Barb (DSN 787-0611)   **Requirements Portfolio Manager**

C3I/Network Directorate	Battle Management Directorate	ACS Directorate

Harvey Ridenoure (DSN 787-8286)   **SOCCER / Workflow / Security**
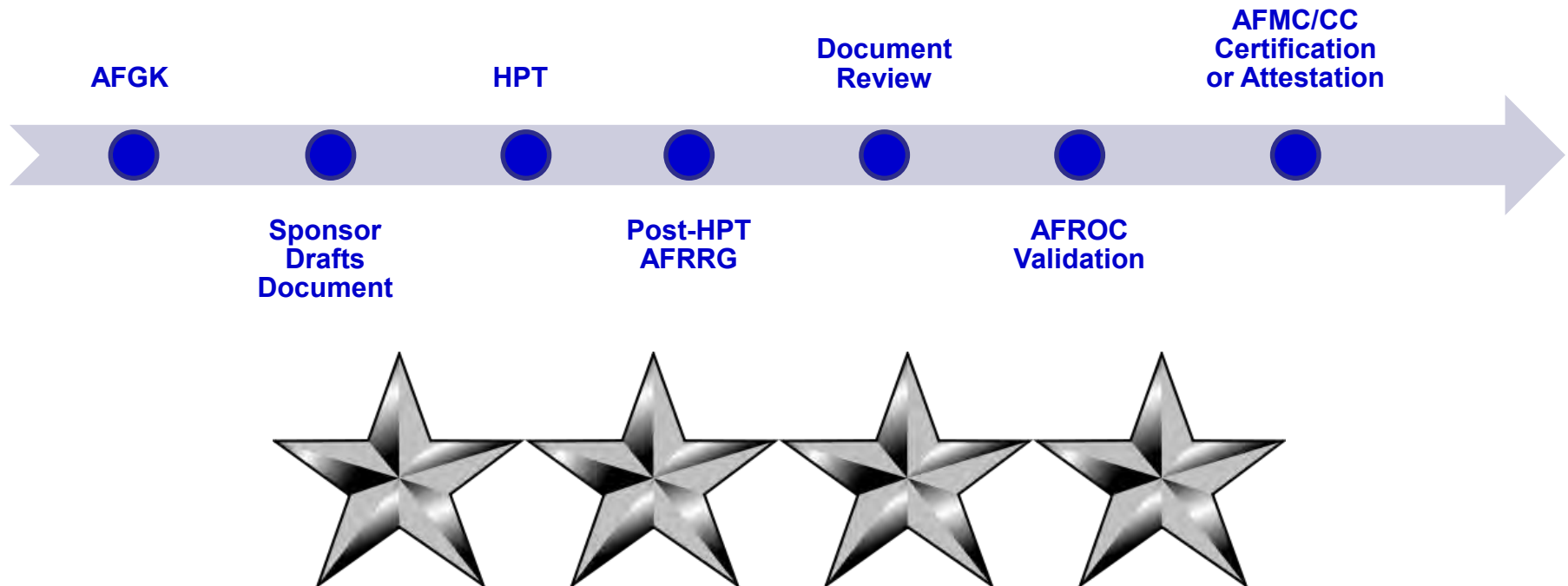
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Summary

- **HQ AFMC has a role throughout the entire capability requirements process**
  - **Assist program offices to navigate capability requirements process**

AFGK

Sponsor
Drafts
Document

HPT

Post-HPT
AFRRG

Document
Review

AFROC
Validation

AFMC/CC
Certification
or Attestation

AFMC/CC is 4-Star Wingman for Requirements Issues

Questions